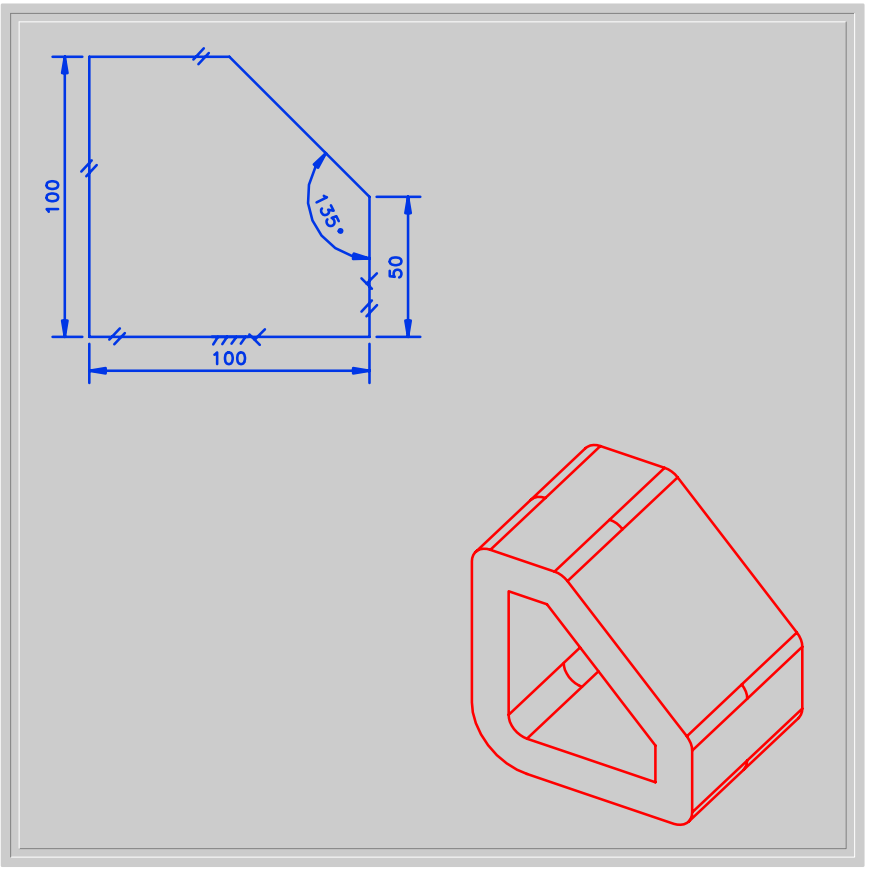


Building Sections

I-DEAS® Tutorials: Fundamental Skills

Learn how to:

- work with sections

Before you begin...

Prerequisite tutorials:

1. Getting Started (I-DEAS™ Multimedia Training)

   –or–

   Introducing the I-DEAS Interface,
   Quick Tips to Using I-DEAS
   –and–
   Creating Parts
2. Sketching and Constraining
3. Dimensioning

To begin this tutorial, make sure you're in the following application and task:

Design, *Manufacturing*, or *Simulation*

Modeler

If you saved the model file created in the tutorial "Dimensioning," open it now and use the sketch that was created.

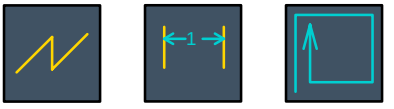
File
Open

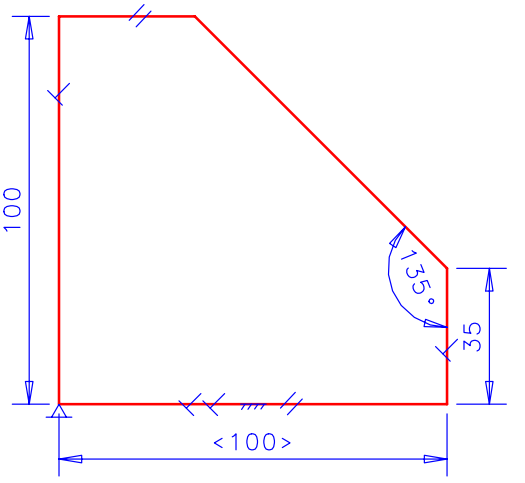
Set your units to mm.

Options
Units

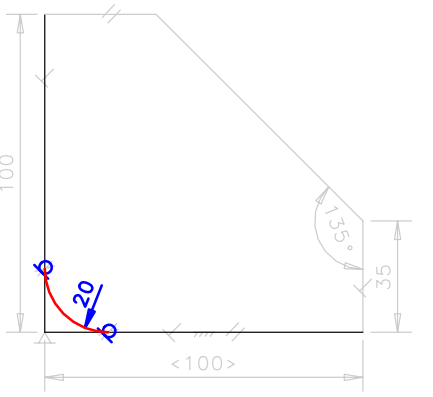
mm (*milli newton*)

If you did not save the model file, or the sketch is no longer on the workbench, create the following sketch before continuing.





Add a fillet in the lower corner. Keep the untrimmed curves.

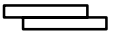


Hint

 *Radius*: 20

 *Trim/Extend* (toggle off)

Save your model file.

 *File*
Save

Warning!

If you are prompted by I-DEAS to save your model file, respond:

 *No*

Save only when the tutorial instructions tell you to—not when I-DEAS prompts for a save.

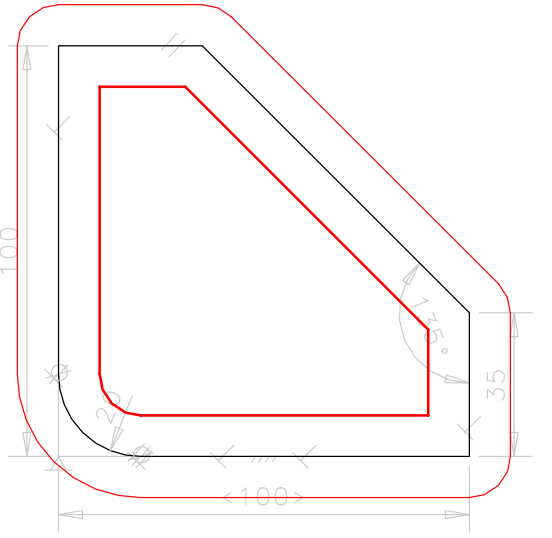
If you make a mistake at any time between saves and can't recover, you can reopen your model file to the last save and start over from that point.

Hint

To reopen your model file to the previous save, press Control-z.

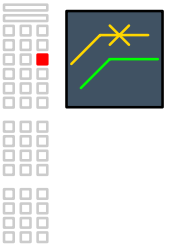
You build a section to predefine a part's cross section by following a path around the wireframe on the workbench. Commands, such as *Extrude* and *Revolve*, automatically create a section which chains around the geometry to be extruded or revolved. Sometimes the software gives you more control if you create the section first.

You can also use sections as a way to group wireframe geometry for other operations, such as *Offset* or *Move*.



When you build sections, keep in mind the *Stop at intersections* option on the *Section Options* form. This option is off by default. When you toggle this option on, the software prompts you to pick each segment of a section where there are intersecting lines, and the section could continue in more than one direction.

Offset two curves without building a section.



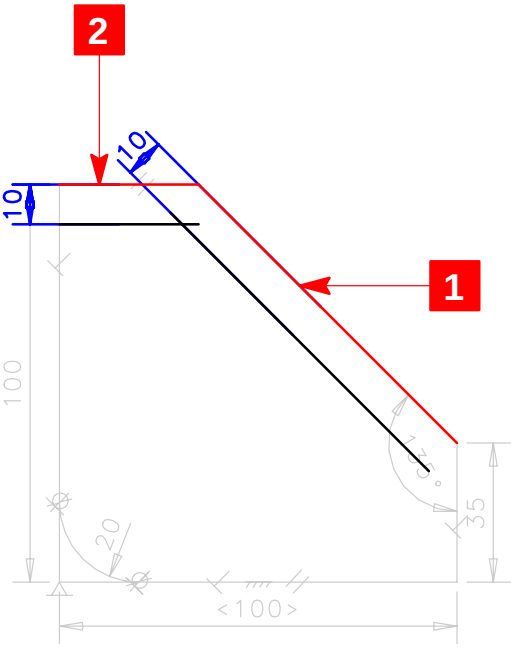
1

Offset form

OK

2

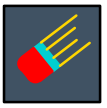
OK

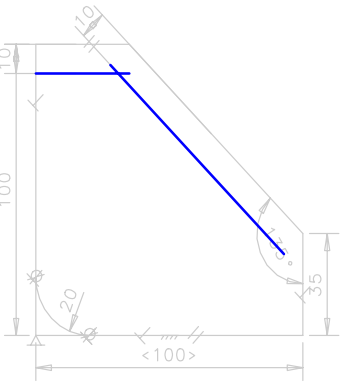


Things to notice

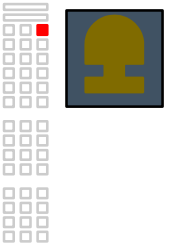
When you don’t build a section, you have to pick the curves individually. The software also doesn’t stop at any intersections so the curves overlap.

Delete the offset curves.





Build a section around the shape using the round corner.



Section Options...

Section Options form

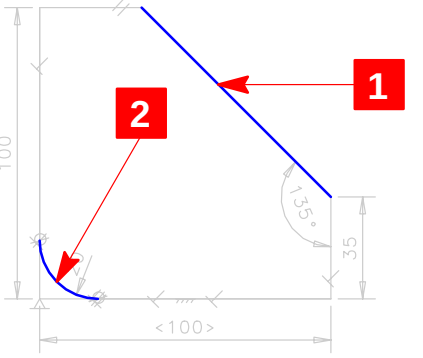
Stop at intersections

OK

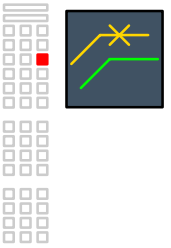
1

2

(Done)



Offset the section 10 mm in both directions, with rounded corners.



1 pick anywhere on the section

(Accept)

Offset form

Distance: 10

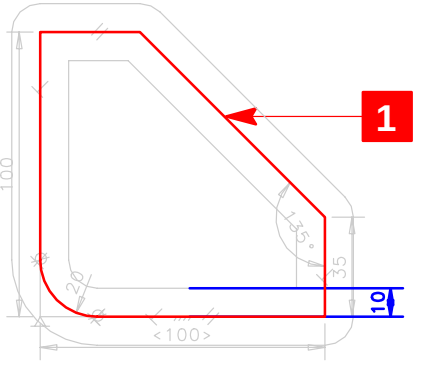
Round Corners

Associativity

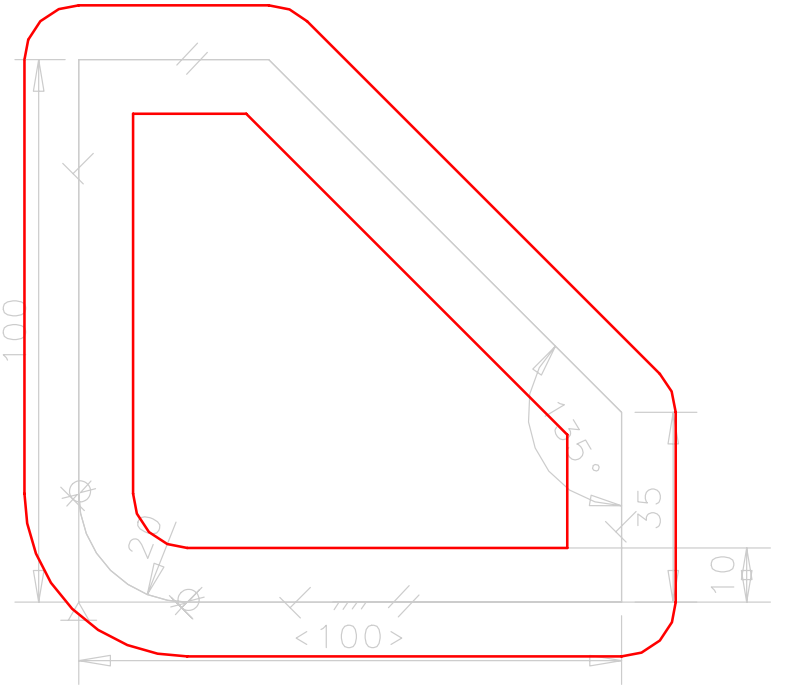
Wireframe

<–|–>

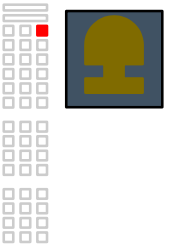
OK



Result



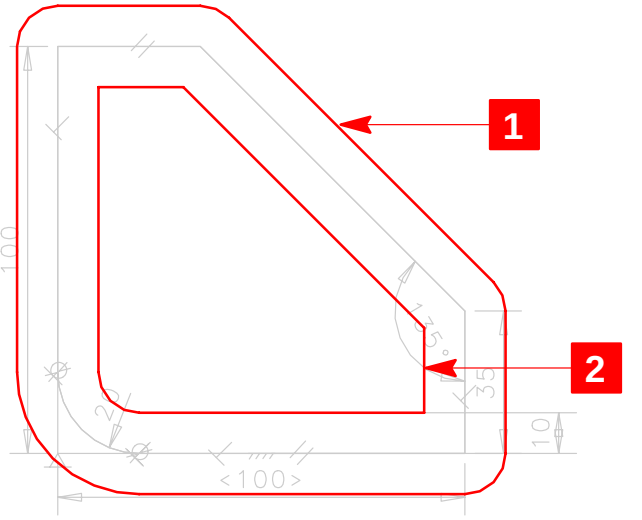
Create a new section from the inner and outer curves.



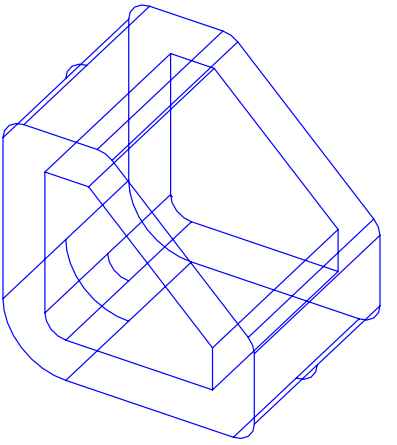
1

2

(Done)



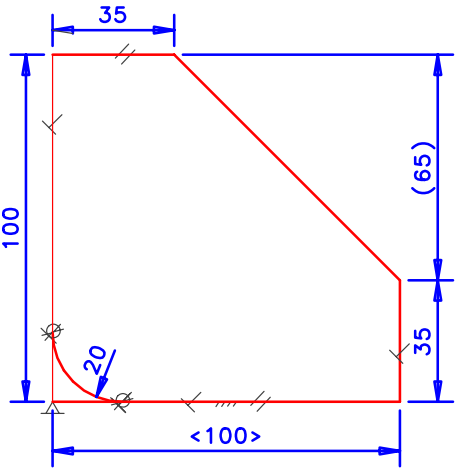
Now extrude the new section 100 mm to create the part shown below.



Open your model file to the last save to get the original sketch on the workbench. You'll use it in another tutorial. Your dimensioning scheme may appear differently from this page depending on whether you opened a model file from a previous workshop or you sketched the wireframe during the setup in this workshop.

Hint

Control-z



Tutorial wrap-up

You have completed the Building Sections tutorial.

Save the model file with this part. You'll use it in the next tutorial.